

**JP04179949**

- AN 1992-263762 [32] WPIX  
DNN N1992-201756 DNC C1992-117646
- 5 TI Pyrrolo thiophene cyan dye-forming couplers - for photographic materials having excellent colour reproducibility.  
DC E24 G06 P83  
PA (FUJF) FUJI PHOTO FILM CO LTD  
CYC 1
- 10 PI JP-----04179949 A 19920626 (199232)\* 25 <--  
ADT JP-----04179949 A 1990JP-0307241 19901115  
PRAI 1990JP-0307241 19901115  
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AB JP 04179949 A UPAB: 19931025
- 15 Cyan dye-forming couplers of formula (I), and (II) are new. R1, R2 and R3 are independently H or a substit. gp.; X = H or a gp. capable of splitting off by coupling reaction with the oxidn. prod. of an aromatic prim. amine deriv. Ag halide colour photographic materials contg. (I) or (II) are also claimed.
- 20 R1 is e.g. halogen, 1-36C aliphatic gp., 6-3C aryl gp., heterocyclyl, alkoxy, aryloxy, etc. R2 and R3 are pref. electron-attracting gp. having Hammett's sigma p value of at least 0.35 (e.g. CN, acyl, carboxyl, carbamoyl, NO2 or sulphamoyl). X is e.g. halogen, alkoxy, aryloxy, sulphonyloxy, acylamino, heterocyclyl etc.
- 25 ADVANTAGE - (I) and (II) can form cyan dyes having excellent absorption characteristics and high fastness.
- In an example of the prepn., to 50 ml of an ethanol soln. contg. 25.0 mmol of (I-1) was added 1 ml of pyrrolidone. To this was further added dropwise 25.0 mmol of (I-2). The mixt. was heated for 8 hrs. under reflux.
- 30 The reaction prod. was purified by silica gel chromatography. Thus, 13.6 mmol of (I-3) was obtd. in a yield of 54.4%. 10.0 mmol of (I-3) was dissolved in 10 g of triethyl phosphite, and heated for 5 hrs. under reflux. The reaction prod. was purified by silica gel chromatography to give 4.53 mmol of (I-4) (yield: 45.3%). When R1 = H, R2 = ethoxycarbonyl.
- 35 R3 = dodecyloxycarbonylphenyl and X = H, the product has m.pt. of 128-132 deg.C.